

Remarks:

Claims 1 - 20 are in this case. All claims are rejected under 35 U.S.C. §102. Several clerical errors in the specification are corrected herein. No new matter is added by these corrections. In the drawings, fig. 6 is corrected to be fig. 6A. Several amendments have been made to the claims only for purposes of improving clarity.

REJECTION UNDER 35 U.S.C. §112:

Claims 1 and 19 are rejected as vague for use of the terms "An article including..." (claim 1) and "An article comprising..." (claim 19). Such terms are well established terms of art in patent law.

On close review however, it was realized that the language of the claims could be improved for clarity. Claim 1 in particular, has been amended to better illustrate the structural and functional relationships between the elements. Also, and only to improve the clarity of the claims, "the at least one first device" and the "first device" are now referred to as the "device" in the dependent claims.

Claims 19 and 20 are canceled. It is believed that the claims as amended now fully comply with the requirements of 35 U.S.C. §112.

REJECTION UNDER 35 U.S.C. §102:

Claims 1-20 are rejected under 35 U.S.C. §102 as anticipated by U.S. Patent No. 6,487,328, "*Single wavelength semiconductor laser with grating-assisted dielectric waveguide coupler*", issued Nov. 26, 2002 to Butler, et al. These rejections are respectfully traversed.

It is well established that a claimed invention is anticipated by a prior art patent only if the patent discloses each and every limitation of the claim. In the present case, independent claim 1 (amended for clarity) calls for an article comprising an optical device and, optically coupled to the device, an optical coupler for receiving light input from the device and outputting light in at least one discrete direction. The optical coupler comprises a core region disposed between two cladding regions. And, the core region has a two-dimensional photonic crystal grating to output the light in at least one direction.

An important aspect of the claimed invention is that the article comprises a two dimensional grating. (Specification, page 4, lines 12-14). *Unlike traditional grating couplers*, the two-dimensional photonic crystal coupler can couple light into a single or discrete number of directions in the far field. (Specification, page 4, lines 14-15).

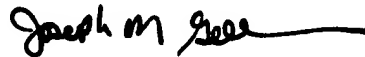
By contrast, Butler discloses a traditional grating 18. (Butler, col. 3, line52, fig. 1). Or, a plurality of traditional one dimensional gratings for use with a plurality of laser sources, with one, one dimensional grating per laser. (Butler, col. 4, lines 4-7, fig. 2). Butler does not disclose a grating formed in two-dimensions and therefore does not anticipate the invention.

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The Examiner cites to Butler as anticipating two dimensional gratings in coupling applications in the section delineated by "col. 1, line 15 to col. 4, line 67 (most of Butler's Specification). Applicants are unable to locate therein any disclosure referring to two dimensional gratings. (Office Action, paper 10, Oct. 27, 2003). This rejection is believed to be in error.

It is believed that the application now fully complies with all provisions of 35 U.S.C. §112 and 35 U.S.C. §102. It is therefore respectfully suggested that the application should be allowed.

Respectfully submitted,



Joseph M. Geller
Reg. No. 48,144
Attorney for Applicants

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LOWENSTEIN SANDLER PC
65 Livingston Avenue
Roseland, New Jersey 07068
Tel.: 973-597-2578